

I claim:

1. An automatic one-shot-modeled compact fluorescent lamps (CFL) discharge tube typically constituted of several said discharge tubes, wherein said discharge tube appears to an U-shaped glass tube with two close parallel leg tubes, and said both parallel leg tubes are bent to a curve with a certain curvature radius simultaneously, just as appearing to “)” shape in the side view.
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2. An automatic one-shot-modeled compact fluorescent lamps (CFL) discharge tube as claimed in claim 1, wherein the diameter of said leg tube of the discharge tube is 6~12mm.
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3. An automatic one-shot-modeled compact fluorescent lamps (CFL) discharge tube as claimed in claim 1, wherein said discharge tube is bent to an arc or an arc with ellipticity.
4. An automatic one-shot-modeled compact fluorescent lamps (CFL) discharge tube as claimed in claim 1, wherein the number of the discharge tubes is in 2~5 or more.
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5. An automatic one-shot-modeled compact fluorescent lamps (CFL) discharge tube as claimed in claim 1, wherein several said discharge tubes are integrated into a whole compact fluorescent lamps (CFL), which can be configured to a circle, an ellipse, a rectangle, a triangle or a polygon in top view.
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6. A method of manufacturing the automatic one-shot-modeled compact fluorescent lamps (CFL) discharge tube, wherein the procedures are to follow the below steps: the first step, put the original glass tube on the conveyer to send into heater, heat the desired portion bending to U-shaped in stage, just as the bending portion is in highest temperature to melting soft, the other portions like the leg tubes are next to the curved segment; the second step, bend the thermal-melting glass tube to U-shaped; the third step, put the bent U-shaped glass tube into the modeling cavity and male dies; the fourth step, by operating with mechanical arm, close the cavity die and the male die so that the bent U-glass tube is embedded into the U-groove curved in the curvature radius; the fifth step, blow up the bending or distorting portion of the U-glass tube so as to fill
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out the U-groove of the closed die via the straight portion like the leg tube; the sixth step, by operating with the mechanical arm, open the cavity die and the male die, a finished glass tube can be stripped.

- 5 7. A method of manufacturing the automatic one-shot-modeled compact fluorescent lamps (CFL) discharge tube as claimed in claim 6, wherein in said first step, the glass tube is conveyed to lying above three wide-section flaming nozzles having different wide just as one or three flaming segments to be heated to melt soft.
- 10 8. A method of manufacturing the automatic one-shot-modeled compact fluorescent lamps (CFL) discharge tube as claimed in claim 6, wherein in said first step, the wide-nozzles are arranged in the sequence□single segment→ single segment→ three segments.
- 15 9. A method of manufacturing the automatic one-shot-modeled compact fluorescent lamps (CFL) discharge tube as claimed in claim 6, wherein in said first step, the wide-nozzles are arranged in the sequence□single segment → three segments→ single segment.
- 20 10. A method of manufacturing the automatic one-shot-modeled compact fluorescent lamps (CFL) discharge tube as claimed in claim 6, wherein in said first step, according to the sinuosity of the glass tube, different segment is treated with different heating temperature.
- 25 11. A method of manufacturing the automatic one-shot-modeled compact fluorescent lamps (CFL) discharge tube as claimed in claim 10, wherein in the first step, according to the sinuosity of the glass tube, different segment is treated with different heating temperature flame in stage treatment.
- 30 12. A method of manufacturing the automatic one-shot-modeled compact fluorescent lamps (CFL) discharge tube as claimed in claim 10, wherein in the first step, according to the sinuosity of the glass tube, different segment is treated with same heating temperature flame and different heating time in stage treatment.
13. A method of manufacturing the automatic one-shot-modeled compact fluorescent lamps (CFL) discharge tube as claimed in claim 10, wherein in the first step, according to the sinuosity of the glass tube, different

segment is treated with different heating temperature flame and different heating time in stage treatment.

- 5 14. A modeling die used for manufacturing the automatic one-shot-modeled compact fluorescent lamps (CFL) discharge tube typically includes a cavity die and a male die, wherein the die parting face is formed along with curved axils of the discharge tube so that the U-groove is divided two half-portions respectively formed on the cavity die and the male die along with the die parting face, the cross-section of the U-groove on each die appears to half circle.
- 10 15. A modeling die used for manufacturing the automatic one-shot-modeled compact fluorescent lamps (CFL) discharge tube as claimed in claim 14, wherein the radius of the U-groove is 2.5~6.5mm, the prefer value is 4.0~6.0mm.
- 15 16. A modeling die used for manufacturing the automatic one-shot-modeled compact fluorescent lamps (CFL) discharge tube as claimed in claim 14, wherein the U-groove on the cavity die is kept in smooth, and the bottom side is built upon with ejector pin with a cone tip for facilitating to striping.